

FIG. 1

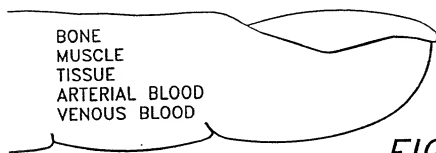
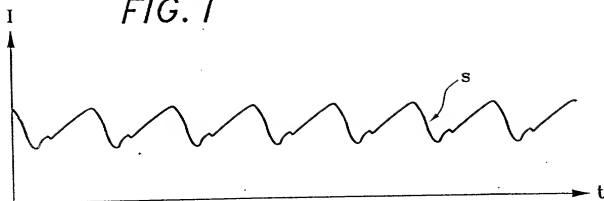
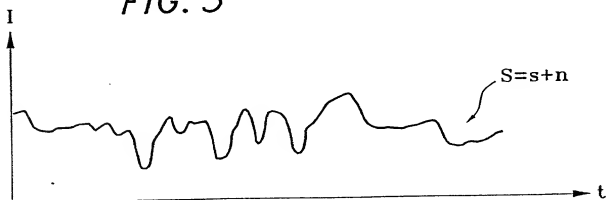


FIG. 2

FIG. 3



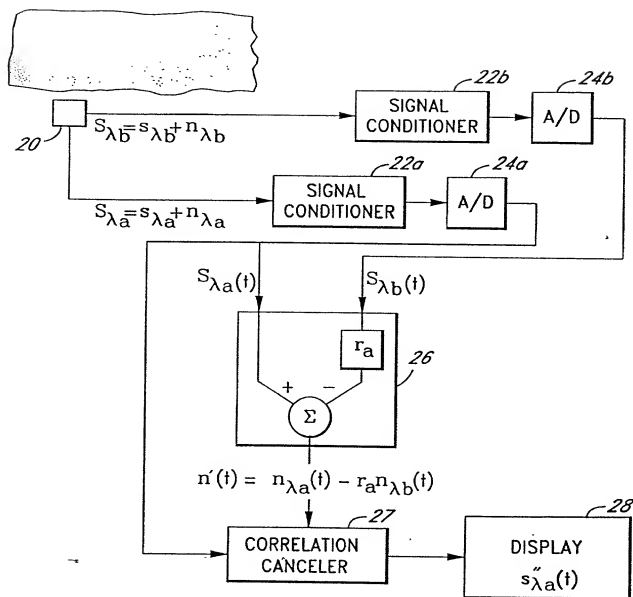
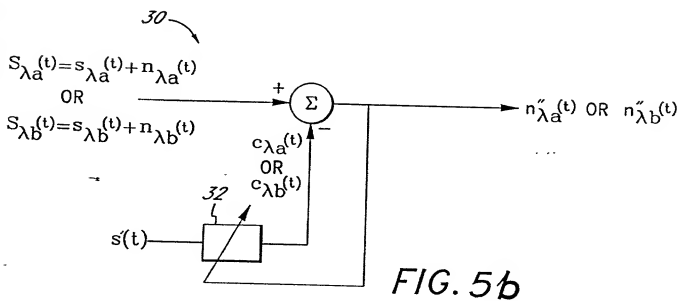
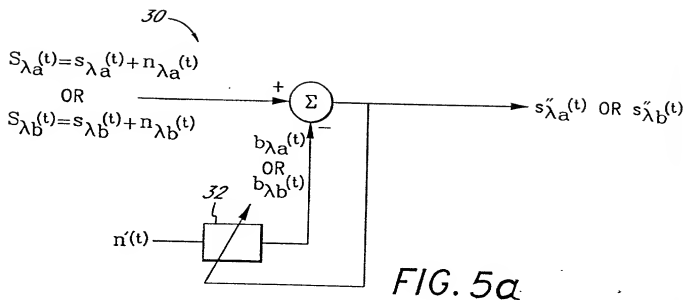


FIG. 4a

Block diagram of a signal processing system for a laser Doppler velocimeter. The system starts with a light source (20) that splits into two paths. The upper path is labeled $S_{\lambda b} = s_{lambda b} + n_{\lambda b}$ and passes through a SIGNAL CONDITIONER (22b) and an A/D converter (24b). The lower path is labeled $S_{\lambda a} = s_{\lambda a} + n_{\lambda a}$ and passes through a SIGNAL CONDITIONER (22a) and an A/D converter (24a). The outputs of both A/D converters are fed into a CORRELATION CANCELER (27). Inside the correlator, the signals are processed to produce $s'(t) = s_{\lambda a}(t) - r_v s_{\lambda b}(t)$, where r_v is a feedback gain. The final output is displayed as $n''_{\lambda a}(t)$ on a DISPLAY (28).

FIG. 4b



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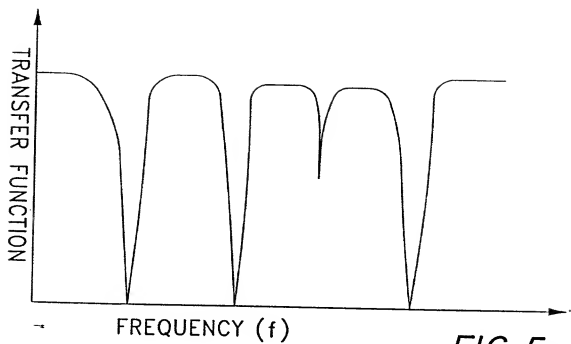


FIG.5c

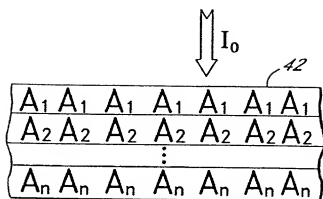


FIG. 6a

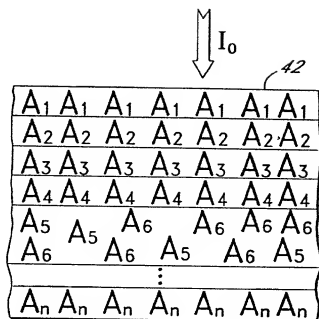


FIG. 6b

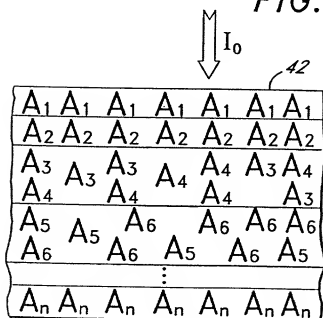


FIG. 6c

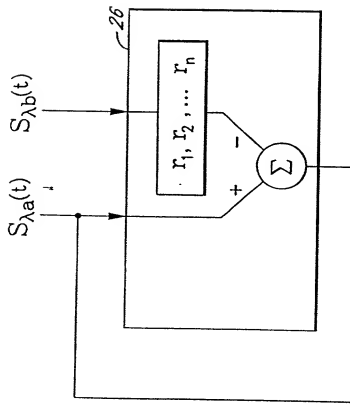


FIG. 7a

$$R'(r_1, t) = S_{\lambda a}(t) - r_1 S_{\lambda b}(t) + \Pi_{\lambda a}(t) - r_1 \Pi_{\lambda b}(t)$$

$$R'(r_2, t) = S_{\lambda a}(t) - r_2 S_{\lambda b}(t) + \Pi_{\lambda a}(t) - r_2 \Pi_{\lambda b}(t)$$

$$R'(r_n, t) = S_{\lambda a}(t) - r_n S_{\lambda b}(t) + \Pi_{\lambda a}(t) - r_n \Pi_{\lambda b}(t)$$

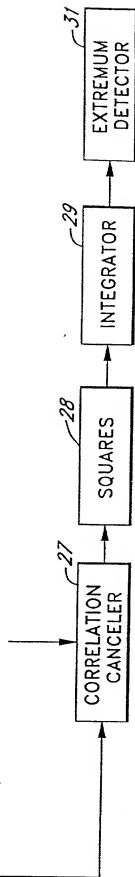


FIG. 7b

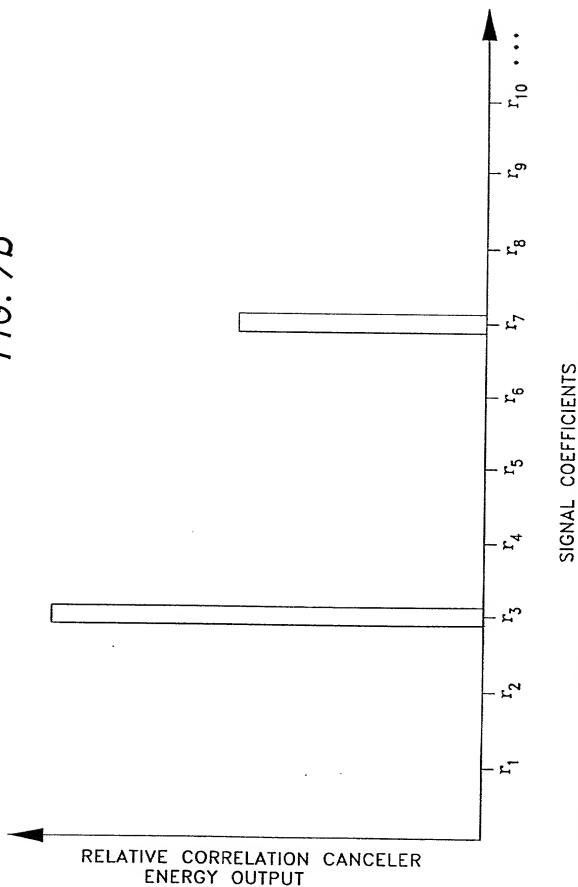
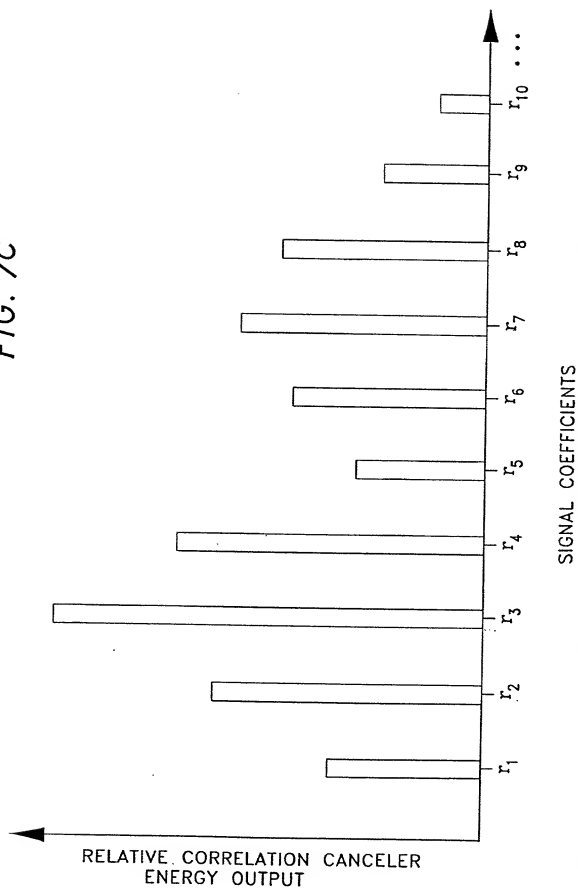


FIG. 7c



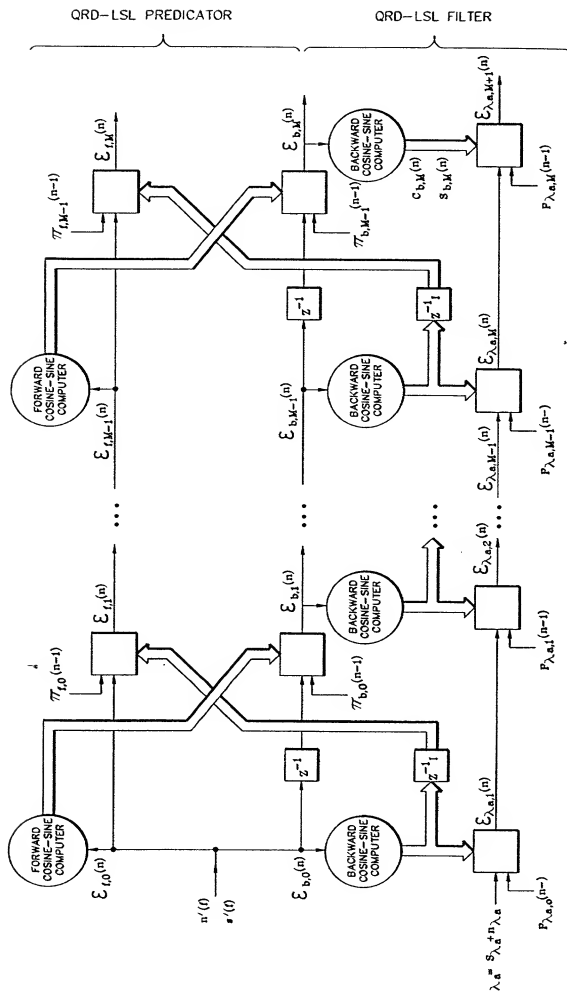


FIG. 8a

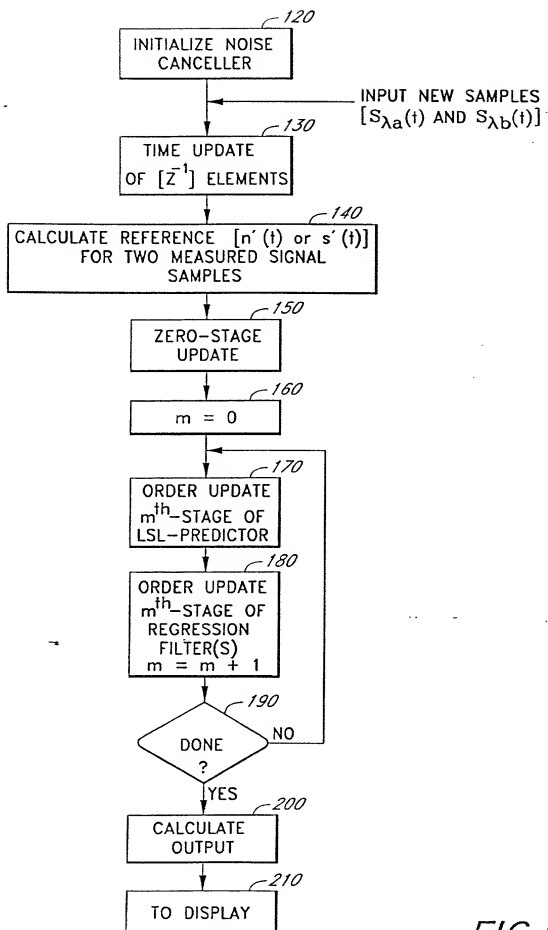


FIG. 9

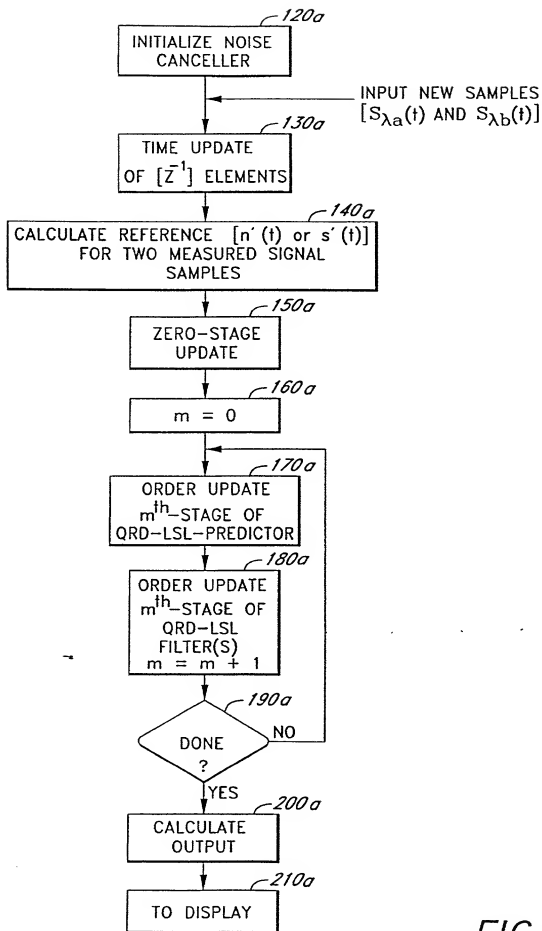
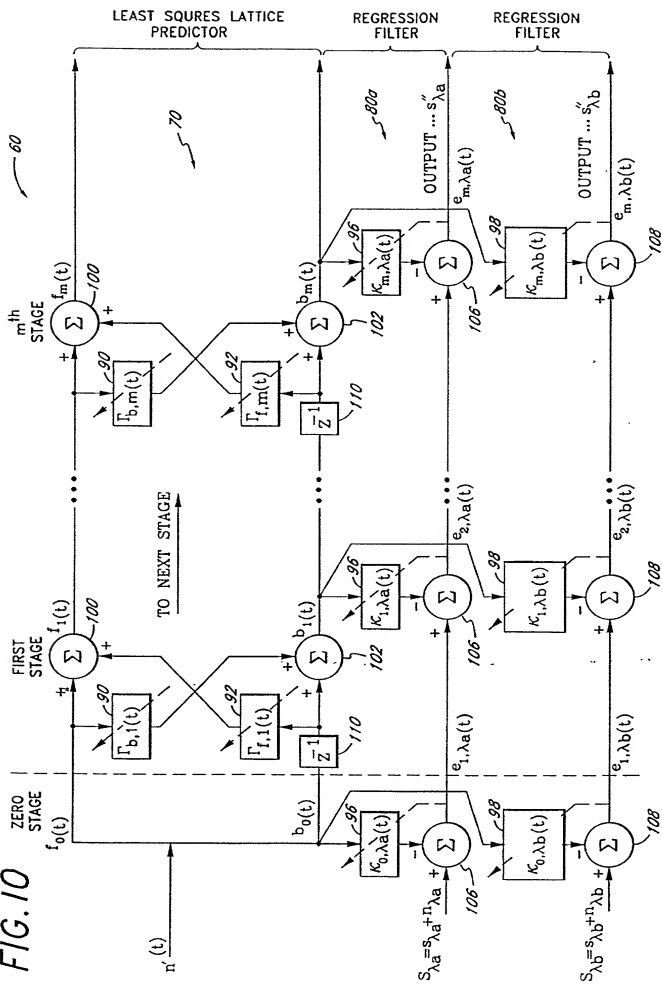


FIG.9a

FIG. 10



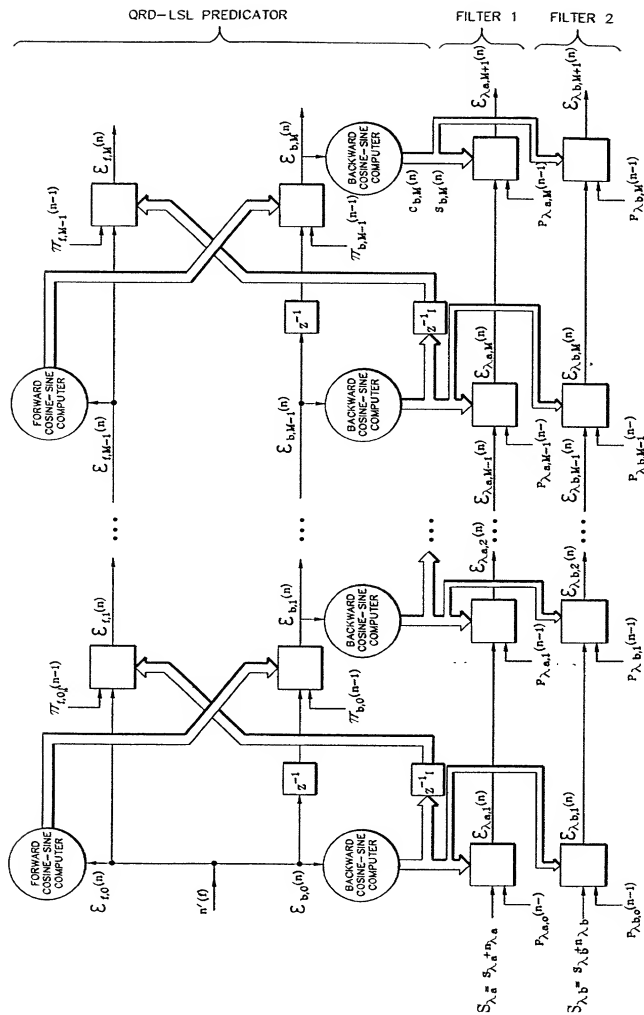


FIG. 10a

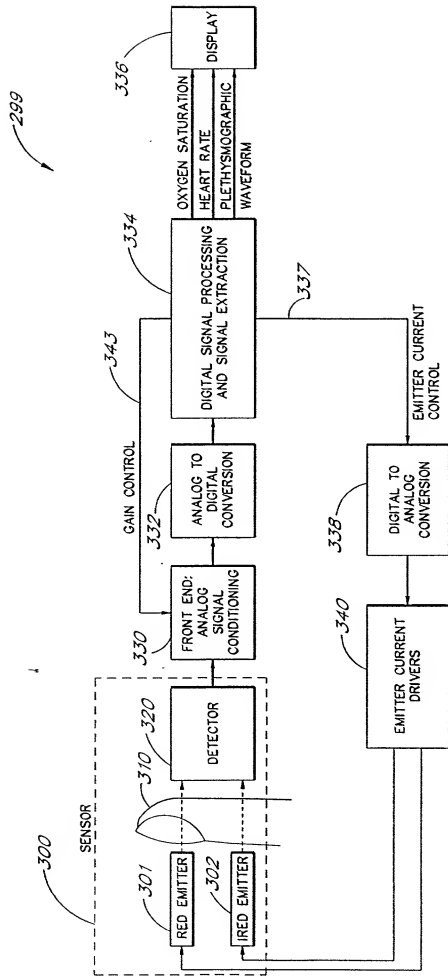


FIG. 11

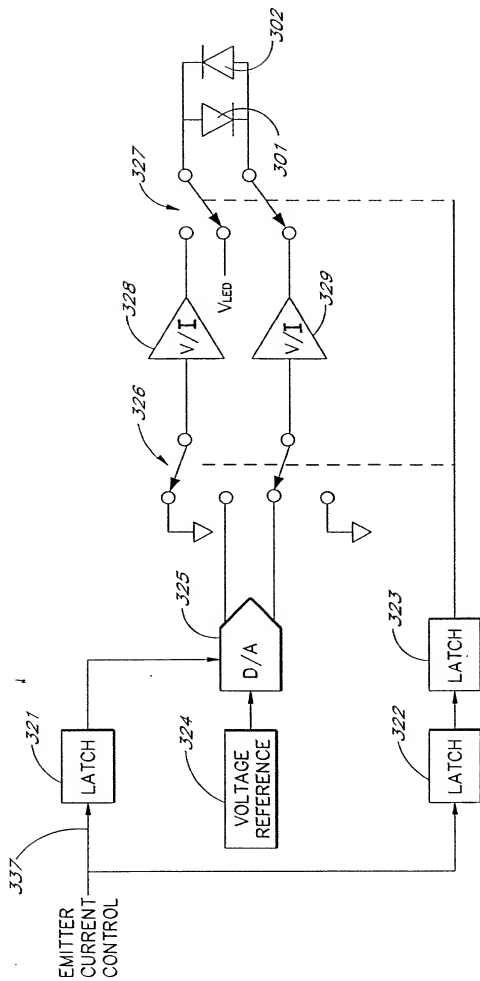


FIG. 11A

300

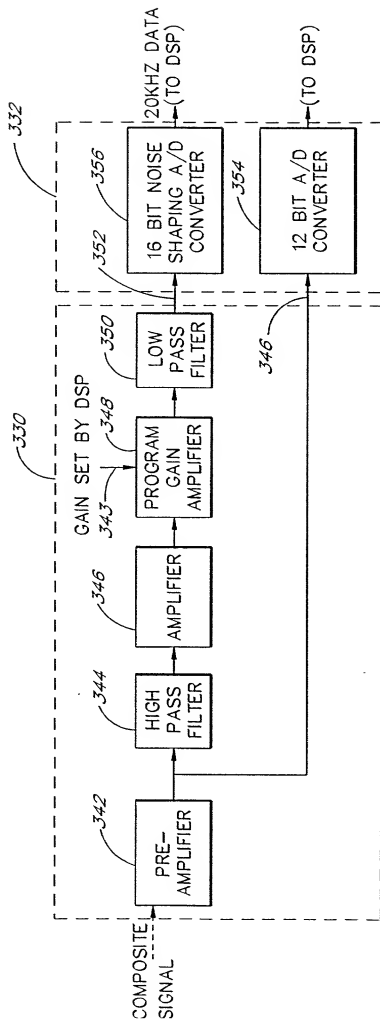
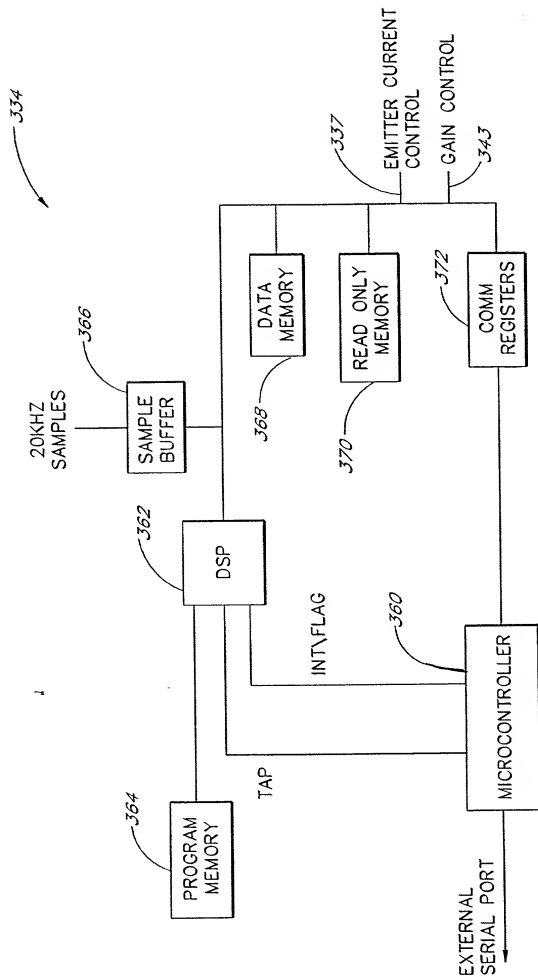


FIG. 12



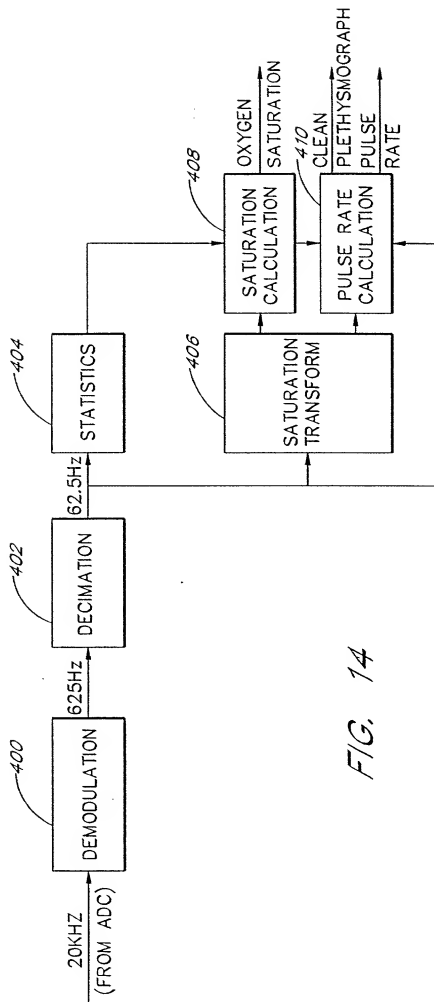


FIG. 14

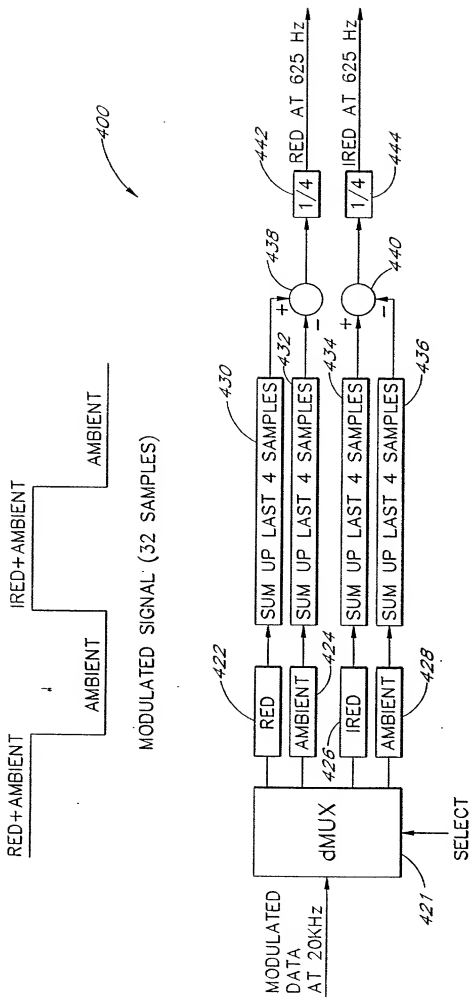


FIG. 15

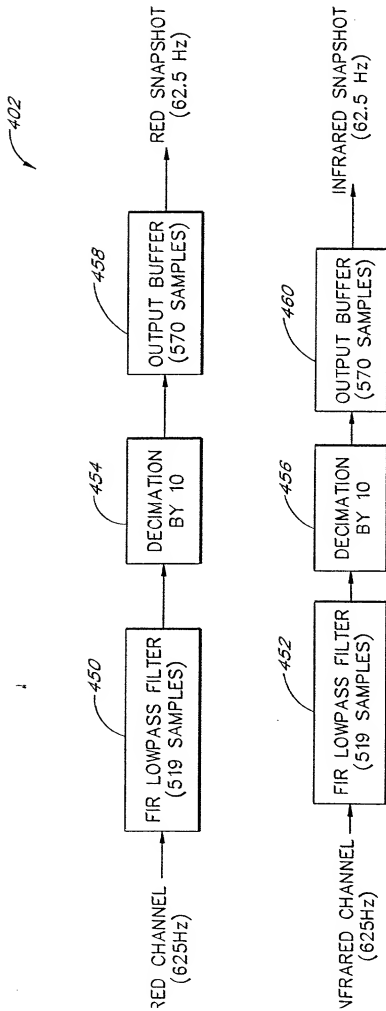


FIG. 16

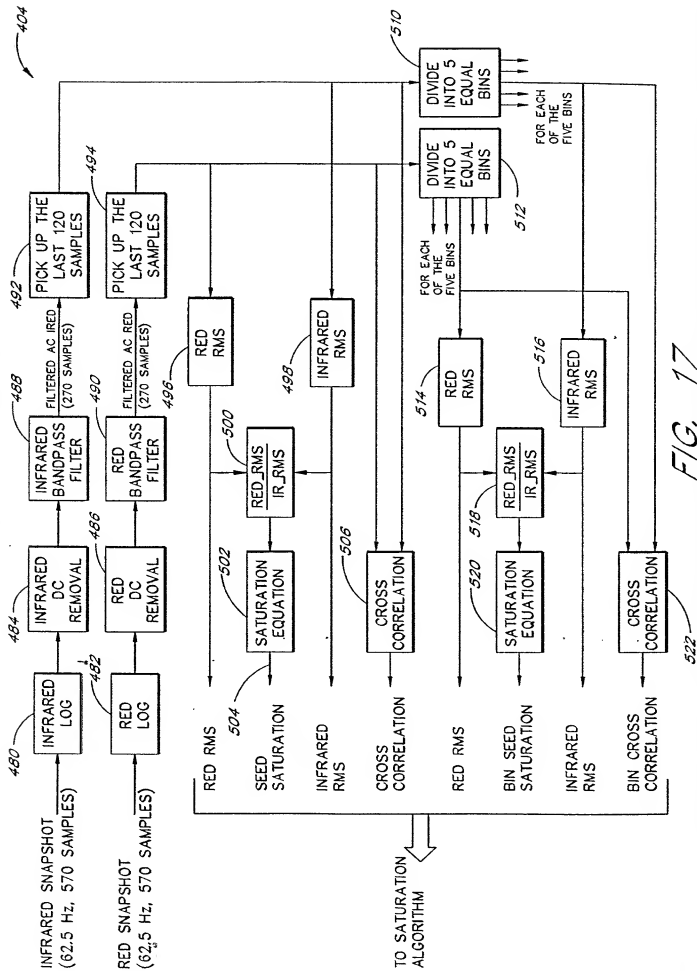


FIG. 17

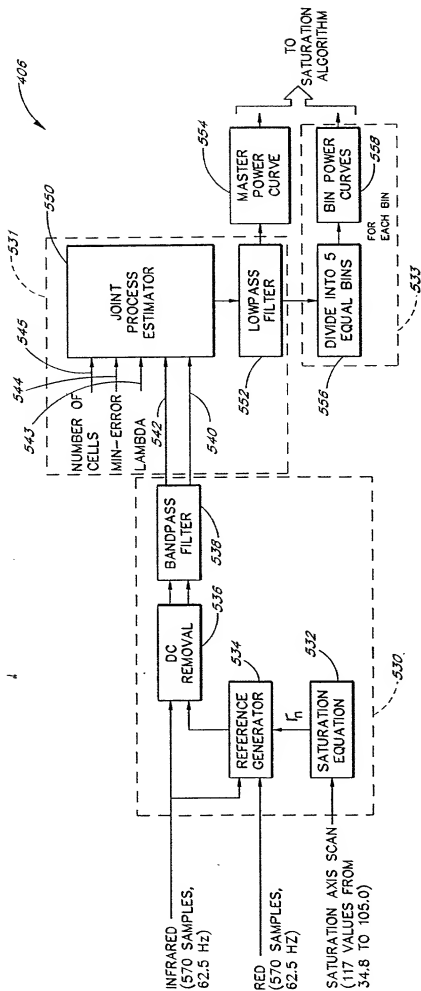


FIG. 18

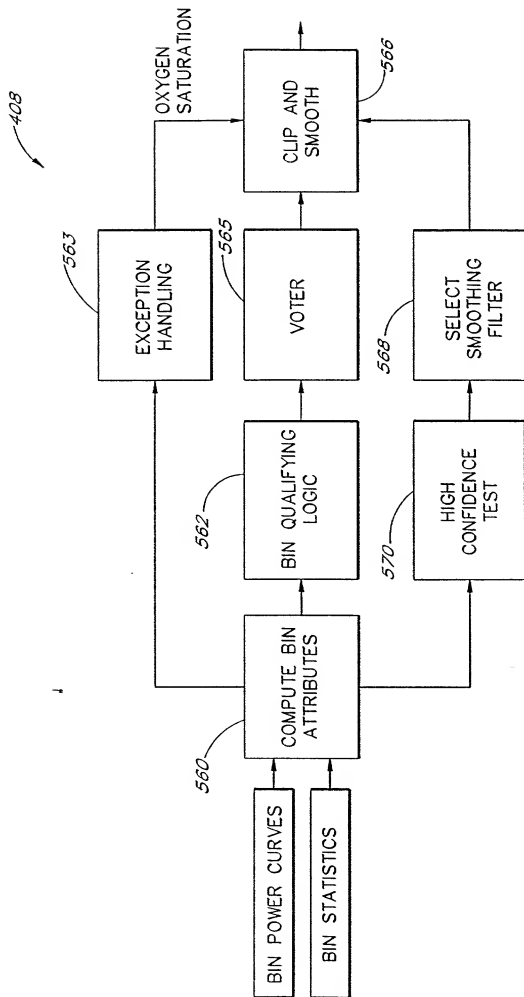


FIG. 19

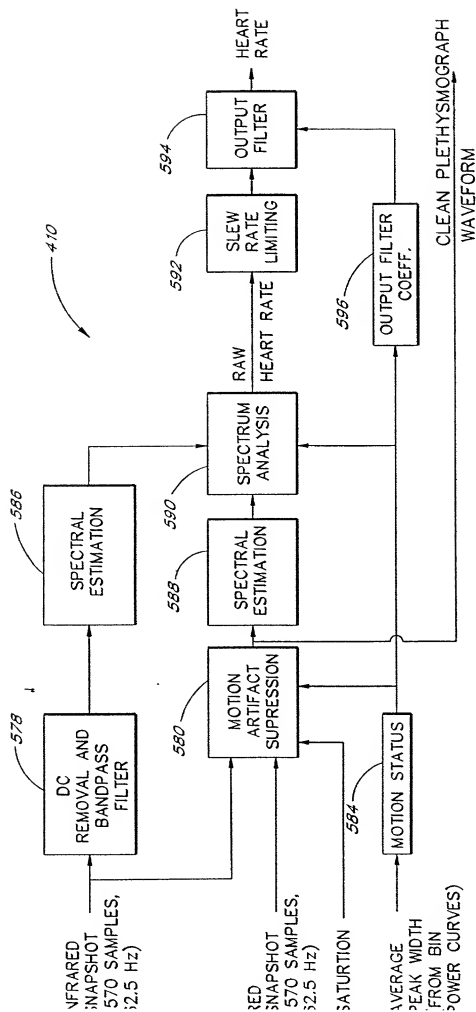


FIG. 20

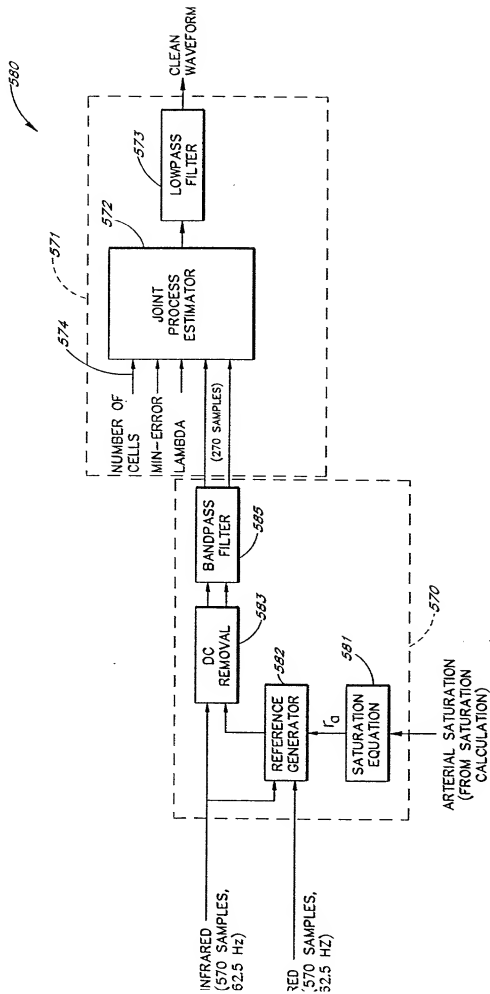


FIG. 21

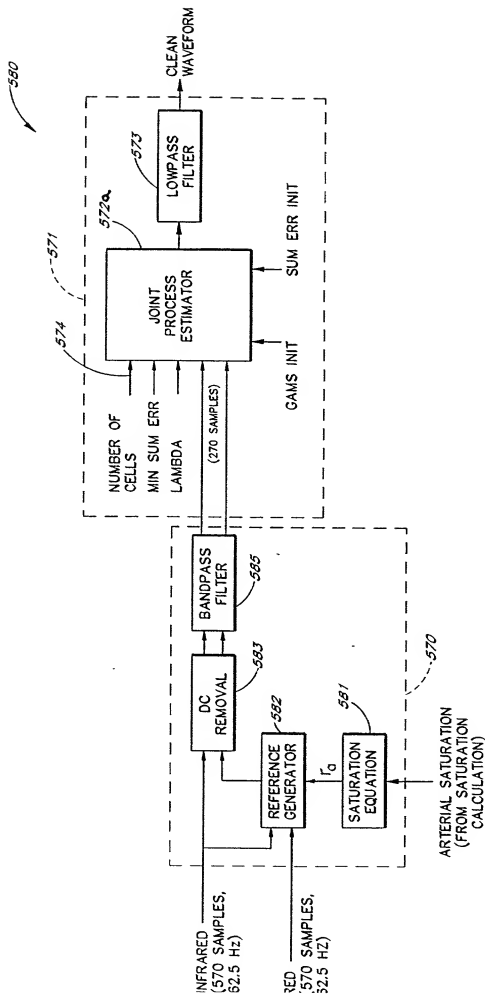
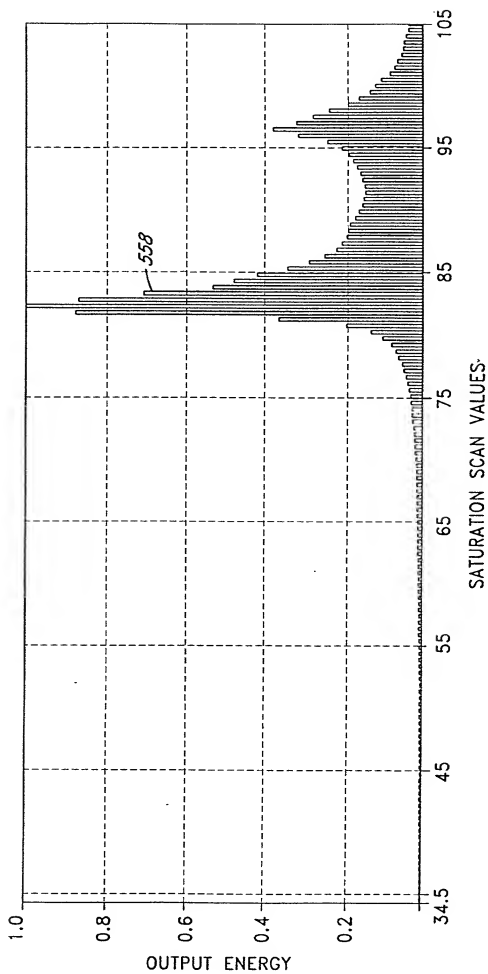


FIG. 21a

FIG. 22



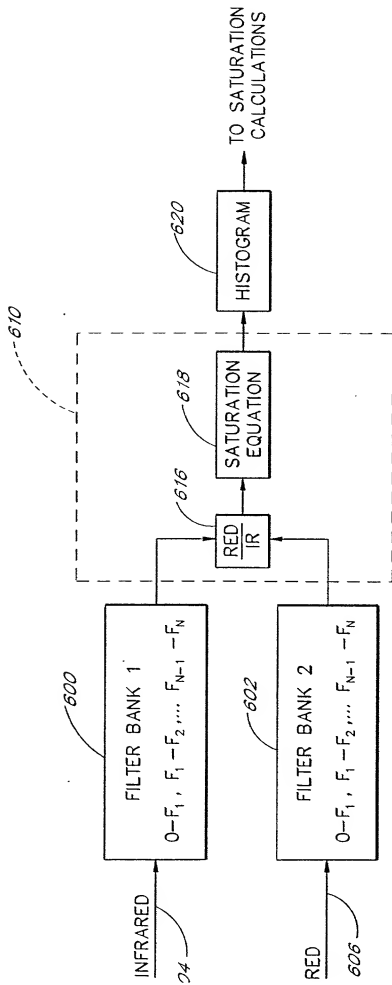
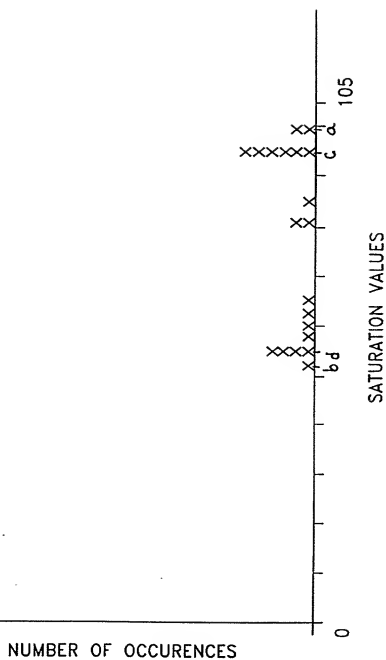


FIG. 23

FIG. 24



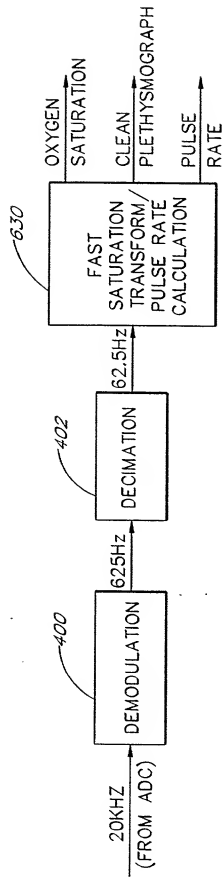


FIG. 25A

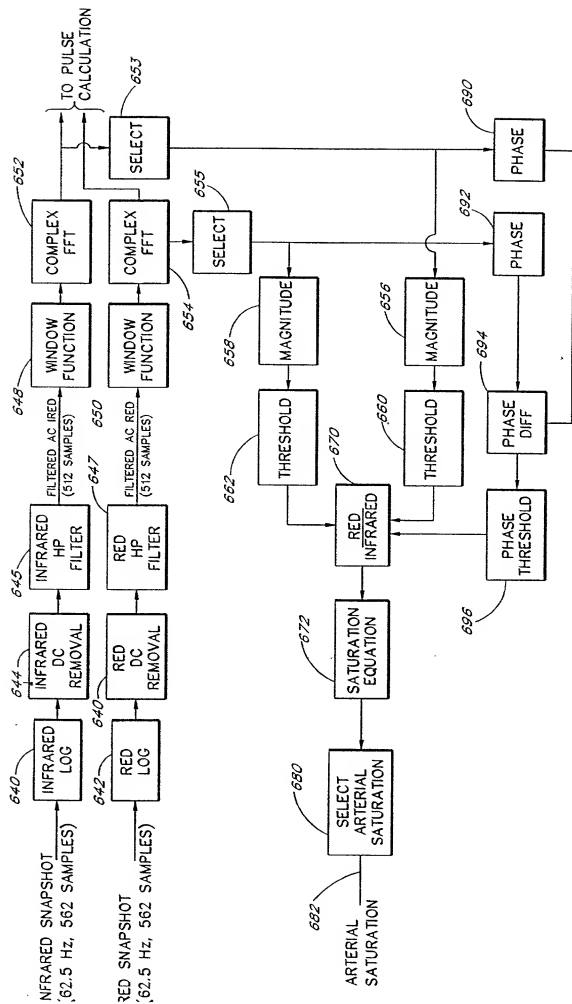


FIG. 25B

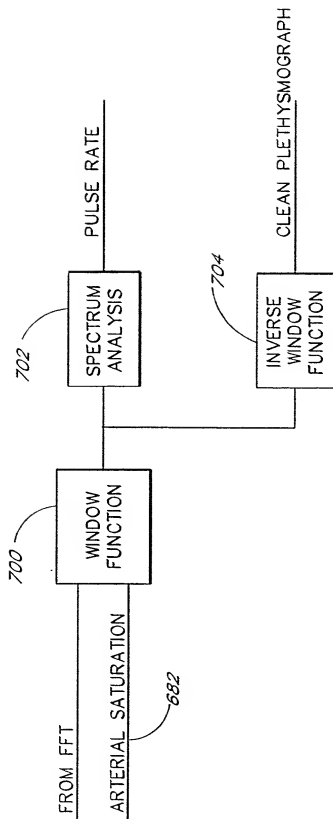


FIG. 25C

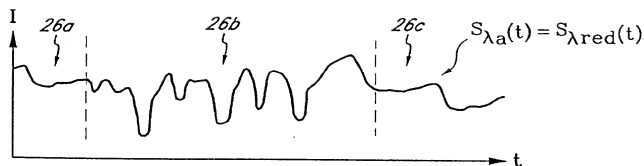


FIG. 26

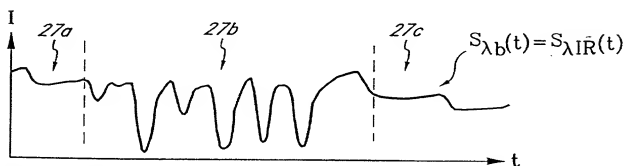


FIG. 27

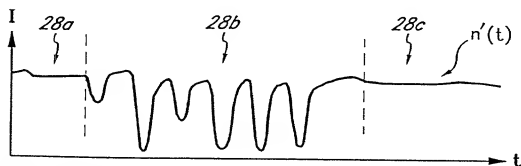


FIG. 28

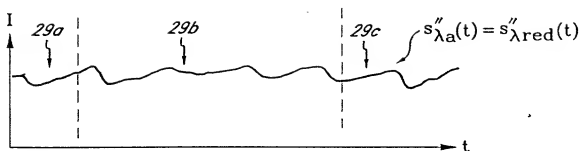


FIG. 29

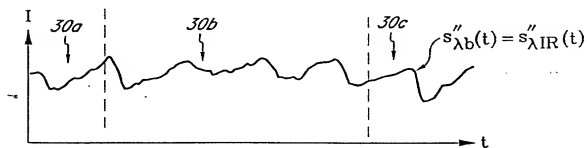


FIG. 30

FIG. 31

